



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,597	02/22/2002	Brad V. Johnson	NUFO009	5739

7590 10/20/2004

JAMES Y. GO
BLAKELY SOKOLOFF, TAYLOR & ZAFMAN LLP.
12400 WILSHIRE BOULEVARD
7TH FLOOR
LOS ANGELES, CA 90025

EXAMINER

MENEFEE, JAMES A

ART UNIT	PAPER NUMBER
----------	--------------

2828

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/082,597

Applicant(s)

JOHNSON, BRAD V.

Examiner

James A. Menefee

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2828

DETAILED ACTION

This action is in response to applicant's request for reconsideration filed 9/2/2004.

Applicant's arguments are persuasive and the prior 35 U.S.C. § 112 rejections are withdrawn.

Claims 1-36 remain pending.

Specification

The disclosure is objected to because of the following informalities:

In paragraph [0036] on p. 13, there are two instances of "optical path 22" but the optical path should be referenced as "33."

Also in paragraph [0036] on p. 13, the specification states that Fig. 1A shows a thick portion of etalon 12 in the path, while Fig. 1B shows a thin portion of etalon 12 in the path. These are reversed, as Fig. 1A shows the thin portion and 1B the thick portion.

In paragraph [0038], a number of references to "opaque regions 46, 48" should instead refer to reference numbers "46, 50." 50 is the opaque region, not 48.

In a number of places throughout the specification, the application references prior serial number 09/814,646. However, that application has no relation to the present invention, it is believed that applicant intended to reference 09/814,464.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2828

Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites the limitation "said magnetically coupled first and second magnetic elements." There is no antecedent basis for this limitation. The claim is examined as if it depends on claim 31, which does provide proper antecedent basis.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4-6, 8-11, 23-24, 27-28, 31-32, and 35-36 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 26-28 of U.S. Patent No. 6,717,965 in view of Missey.

Regarding all of these claims, '965 discloses a tuning element positioned in a light beam that is formed by a gain medium, a drive element driving the tuning element, a cavity reflector that is necessarily positioned after the tuning element, and a grid generator. There is not disclosed the drive element magnetically coupled to the tuning element, the tuning element and drive elements including magnetic elements for providing the magnetic coupling and the driving.

Art Unit: 2828

Missey teaches a magnetic driver that will necessarily include these elements, see the below 103 rejections.

Claims 1-36 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-32 of U.S. Patent No. 6,788,724 in view of Missey.

'724 appears to clearly claim all of the elements described in the presently claimed invention, including tuning elements, driver, gain medium, reflectors, grid generator, hermetically sealed housing, carbon drain, moisture trap, and inert atmosphere. Except there is not claimed the magnetic coupling and associated magnetic elements. This is taught by Missey with motivation as in the below 103 rejections.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 8-9, 23-24, 27, 31-32, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Missey et al. (US 6,754,243).

Art Unit: 2828

Regarding claim 1 and 35, Missey discloses an optical apparatus comprising a tuning element 16 positioned in a light beam and a drive element 24 magnetically coupled to said tuning element. Note that element 16 is for selecting one of the beams, and thus may be interpreted as a tuning element (see col. 2 lines 3-8) and element 24 may be a magnetic actuator (col. 6 lines 12-14).

Regarding claim 4, Missey discloses gain medium 13-1 emitting a light beam.

Regarding claims 8-9, for the magnetic actuator to operate, there further must inherently include magnetic elements coupled to the tuning and drive elements so that the translation of the element 16 is possible.

Regarding claims 23, 24, 27, 31, and 32, these methods will necessarily be carried out in the operation of the devices disclosed as in the above rejections.

Claims 1, 4, 8-9, 23-24, 27, 31-32, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Espindola et al. (US 5,999,546).

Regarding claims 1 and 35, Espindola discloses an optical apparatus comprising tuning element 11 positioned in a light beam (from laser pump 19), and a drive element (magnetic solenoid 18) magnetically coupled to the tuning element.

Regarding claim 4, a gain medium emits the light beam.

Regarding claim 8, Espindola discloses a laser apparatus comprising gain medium 19, tuning element 11 positioned in the beam emitted by the gain element, first magnetic element 15 coupled to the tuning element, and second magnetic element 17 magnetically coupled to the first

Art Unit: 2828

magnetic element to actuate the first magnetic element and tuning element according to actuation of the second magnetic element.

Regarding claim 9, there is further drive element 18.

Regarding claims 23, 24, 27, and 31-32, these method claims will be carried out by the devices shown in the above rejections.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-10, 12-18, 20-28, and 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zorabedian (US 6,108,355) in view of Missey.

Independent claims:

Regarding claims 1, 23, and 35, Zorabedian discloses an optical apparatus comprising tuning element positioned in a light beam, and a drive element 160 driving the tuning element so that it translates up and down relative to the beam. It is not disclosed that the drive element is magnetically coupled to the tuning element. Missey teaches that a magnetic acuation may be done to translate an element up and down relative to the beam. It would have been obvious to one skilled in the art to use the magnetic acuation as an alternative means for translation of the tuning element, as taught by Missey.

Art Unit: 2828

Regarding claims 8, 16, and 31, the claims are combinations of the limitations of claims 1 and some of the dependent claims, and thus are taught as shown above and below.

Dependent claims:

Regarding claims 2, 7, 12, 25-26, 30, 33, and 36, it is not disclosed to include the elements in a hermetically sealed housing. This is known in the art, and it would have been obvious to one skilled in the art to include the element in a hermetically sealed housing to protect the optical elements from contaminants in the environment that could degrade performance. It would additionally have been obvious to one skilled in the art that certain parts of the system need not be included in the housing in order to facilitate easy interchangeability, as is well known, because certain elements, such as the driver, would be less susceptible to degradation of contaminants than other elements, like the gain medium and tuning element.

Regarding claims 3, 17, and 24, there is not explicitly taught by Missey the magnetic elements associated with the parts. However, in order to achieve the magnetic actuation contemplated in Missey, magnetic elements must be included. The magnetic elements would necessarily be located on the element to be translated, i.e. the tuning element, and on the driver, so that the translated tuning element may actually be translated magnetically.

Regarding claim 4, and 27, Zorabedian discloses gain medium 102 emitting the beam.

Regarding claims 5, 10, 18, 28 Zorabedian teaches reflector 122 positioned after the tuning element.

Regarding claims 9 and 32 there is taught a drive element and magnetic elements as described above.

Art Unit: 2828

Regarding claims 13-15 and 20-22, there is not disclosed the carbon drain, inert atmosphere, and moisture trap inside the hermetically sealed housing. Such elements are well known in the art. It would have been obvious to one skilled in the art to include these elements because they will remove contaminants from the housing that could degrade the laser radiation, as is well known.

Regarding claim 34, the claim is a combination of limitations described above.

Claims 6, 11, 19, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zorabedian and Missey as applied to the claims above, and further in view of Lunt (US 6,215,802). Zorabedian and Missey teach the limitations of the above claims, but do not teach a grid generator located in the optical path within the cavity. Lunt teaches a grid etalon, i.e. a grid generator, that may be placed in a laser system (col. 1 line 41 – col. 2 line 20). It would have been obvious to one skilled in the art to use the grid generator of Lunt because this will accomplish the multiplexing and demultiplexing of signals in telecommunication devices and will meet the standards of the ITU, as taught by Lun

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Each of these references also include a tuning element magnetically coupled with a drive element, and thus could be used in a 35 U.S.C. § 102 rejection of at least claim 1.

Art Unit: 2828

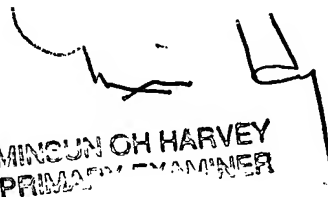
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (571) 272-1944. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JM
October 15, 2004



MINSUN OH HARVEY
PRIMARY EXAMINER